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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/847,993	05/04/2001	Abdullah A. Al-Eidan	P66599US0	7601

7590 05/18/2005

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EXAMINER	
WARE, CICELY Q	
ART UNIT	PAPER NUMBER
2634	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/847,993	AL-EIDAN, ABDULLAH A.	
	Examiner	Art Unit	
	Cicely Ware	2634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *amendment filed on 11/12/2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-10, 13-26, 29-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-10,13-26 and 29-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12 November 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-36 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-10, 13-26, 29-36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1-10, 13-26, 29-36 recite "significant sidebands". On Pg. 8, line 4, 13, Pg. 9, line 1-2, Pg. 10, line 14, applicant discloses "sidebands". Therefore support for "significant sidebands" is not clearly described.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11

F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1-3, 6-9, 15, 17-19, 22-25, 31 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-14 of U.S. Patent No. 6,205,184 Although the conflicting claims are not identical, they are not patentably distinct from each other because:

(1) With regard to claim 1, the subject matter claimed in claim 1 of the instant application is fully disclosed in the patent claim 1 and is covered by the patent since the patent and the application are claiming common subject matter, as follows: examiner asserts that the applicant's patent inherently encompasses the instant application.

The instant application recites using a small modulation index to suppress the upper and lower sidebands. Applicant's patent recites using a small modulation index to create a small or very small frequency deviation. It is well known in the art that in using a small modulation index the upper and lower sidebands are reduced which inherently causes suppression of the frequency deviation.

The instant application recites a modulation index not greater than 0.2. This limitation is encompassed in applicant's patent for a modulation index of not greater

than 1. Not greater than 1 includes values from 0 to 1. Not greater than 0.2 includes values from 0 to 0.2. It is inherent that the values from 0 to 1 include values of 0 to 0.2.

The instant application recites transmitting the frequency-modulated information signal without the upper and lower significant sidebands such that the transmitted information signal obtains a total power of said transmitter and includes only the instantaneous frequency varied about the carrier frequency. However if the information signal is transmitted without any sidebands the inherent result is an information signal with frequency varied around the carrier frequency.

The instant application recites without any upper and lower sidebands, which examiner asserts is the same as suppressed upper and lower sidebands. Examiner also asserts that expanded is the same as wideband.

(2) With regard to claim 2, claim 2 of the instant application recites all the limitations of claim 2 of applicant's patent. Examiner also asserts that expanded is the same as wideband.

(3) With regard to claim 3, claim 3 of the instant application recites all the limitations of claim 3 of applicant's patent. Examiner also asserts that expanded is the same as wideband.

(4) With regard to claim 6, the subject matter claimed in claim 6 of the instant application is fully disclosed in the patent claim 6 and is covered by the patent since the patent and the application are claiming common subject matter, as follows: examiner asserts that the applicant's patent inherently encompasses the instant application.

The instant application recites using a small modulation index to suppress the upper and lower sidebands. Applicant's patent recites using a small modulation index to create a small or very small frequency deviation. It is well known in the art that in using a small modulation index the upper and lower sidebands are reduced which inherently causes suppression of the frequency deviation.

The instant application recites without any upper and lower sidebands, which examiner asserts is the same as suppressed upper and lower sidebands. Examiner also asserts that expanded is the same as wideband.

(5) With regard to claim 7, claim 7 of the instant application recites all the limitations of claim 7 of applicant's patent.

The instant application recites without any upper and lower sidebands, which examiner asserts is the same as suppressed upper and lower sidebands.

(6) With regard to claim 8, the subject matter claimed in claim 8 of the instant application is fully disclosed in the patent claim 8 and is covered by the patent since the patent and the application are claiming common subject matter, as follows: examiner asserts that the applicant's patent inherently encompasses the instant application.

The instant application recites using a small modulation index to suppress the upper and lower sidebands. Applicant's patent recites using a small modulation index to create a small or very small frequency deviation. It is well known in the art that in using a small modulation index the upper and lower sidebands are reduced which inherently causes suppression of the frequency deviation.

The instant application recites without any upper and lower sidebands, which examiner asserts is the same as suppressed upper and lower sidebands.

(7) With regard to claim 9, claim 9 of the instant application recites all the limitations of claim 9 of applicant's patent.

The instant application recites without any upper and lower sidebands, which examiner asserts is the same as suppressed upper and lower sidebands. Examiner also asserts that expanded is the same as wideband.

(8) With regard to claim 15, the subject matter claimed in claim 15 of the instant application is fully disclosed in the patent claim 1 and is covered by the patent since the patent and the application are claiming common subject matter, as follows: examiner asserts that the applicant's patent inherently encompasses the instant application.

The instant application recites using a small modulation index to suppress the upper and lower sidebands. Applicant's patent recites using a small modulation index to create a small or very small frequency deviation. It is well known in the art that in using a small modulation index the upper and lower sidebands are reduced which inherently causes suppression of the frequency deviation.

The instant application recites a modulation index not greater than 0.2. This limitation is encompassed in applicant's patent for a modulation index of not greater than 1. Not greater than 1 includes values from 0 to 1. Not greater than 0.2 includes values from 0 to 0.2. It is inherent that the values from 0 to 1 include values of 0 to 0.2.

The instant application recites transmitting the frequency-modulated information signal without the upper and lower significant sidebands such that the transmitted

information signal obtains a total power of said transmitter and includes only the instantaneous frequency varied about the carrier frequency. However if the information signal is transmitted without any sidebands the inherent result is an information signal with frequency varied around the carrier frequency.

The instant application recites without any upper and lower sidebands, which examiner asserts is the same as suppressed upper and lower sidebands.

(9) With regard to claim 17, the subject matter claimed in claim 17 of the instant application is fully disclosed in the patent claim 1 and is covered by the patent since the patent and the application are claiming common subject matter, as follows: examiner asserts that the applicant's patent inherently encompasses the instant application.

The instant application recites using a small modulation index to suppress the upper and lower sidebands. Applicant's patent recites using a small modulation index to create a small or very small frequency deviation. It is well known in the art that in using a small modulation index the upper and lower sidebands are reduced which inherently causes suppression of the frequency deviation.

The instant application recites a modulation index not greater than 0.2. This limitation is encompassed in applicant's patent for a modulation index of not greater than 1. Not greater than 1 includes values from 0 to 1. Not greater than 0.2 includes values from 0 to 0.2. It is inherent that the values from 0 to 1 include values of 0 to 0.2.

The instant application recites transmitting the frequency-modulated information signal without the upper and lower significant sidebands such that the transmitted information signal obtains a total power of said transmitter and includes only the

instantaneous frequency varied about the carrier frequency. However if the information signal is transmitted without any sidebands the inherent result is an information signal with frequency varied around the carrier frequency.

The instant application recites without any upper and lower sidebands, which examiner asserts is the same as suppressed upper and lower sidebands.

Examiner also asserts that expanded is the same as wideband.

(10) With regard to claim 18, of the instant application recites all the limitations of claim 2 of applicant's patent.

Examiner also asserts that expanded is the same as wideband.

(11) With regard to claim 19, of the instant application recites all the limitations of claim 3 of applicant's patent.

Examiner also asserts that expanded is the same as wideband.

(12) With regard to claim 22, claim 22 of the instant application recites all the limitations of claim 6 of applicant's patent.

The instant application recites without any upper and lower sidebands, which examiner asserts is the same as suppressed upper and lower sidebands.

(13) With regard to claim 23, claim 23 of the instant application recites all the limitations of claim 7 of applicant's patent.

The instant application recites without any upper and lower sidebands, which examiner asserts is the same as suppressed upper and lower sidebands.

(14) With regard to claim 24, the subject matter claimed in claim 24 of the instant application is fully disclosed in the patent claim 8 and is covered by the patent since the

patent and the application are claiming common subject matter, as follows: examiner asserts that the applicant's patent inherently encompasses the instant application.

The instant application recites using a small modulation index to suppress the upper and lower sidebands. Applicant's patent recites using a small modulation index to create a small or very small frequency deviation. It is well known in the art that in using a small modulation index the upper and lower sidebands are reduced which inherently causes suppression of the frequency deviation.

The instant application recites without any upper and lower sidebands, which examiner asserts is the same as suppressed upper and lower sidebands.

(15) With regard to claim 25, claim 25 of the instant application recites all the limitations of claim 9 of applicant's patent.

Examiner also asserts that expanded is the same as wideband.

(16) With regard to claim 31, the subject matter claimed in claim 31 of the instant application is fully disclosed in the patent claim 1 and is covered by the patent since the patent and the application are claiming common subject matter, as follows: examiner asserts that the applicant's patent inherently encompasses the instant application.

The instant application recites using a small modulation index to suppress the upper and lower sidebands. Applicant's patent recites using a small modulation index to create a small or very small frequency deviation. It is well known in the art that in using a small modulation index the upper and lower sidebands are reduced which inherently causes suppression of the frequency deviation.

The instant application recites a modulation index not greater than 0.2. This limitation is encompassed in applicant's patent for a modulation index of not greater than 1. Not greater than 1 includes values from 0 to 1. Not greater than 0.2 includes values from 0 to 0.2. It is inherent that the values from 0 to 1 include values of 0 to 0.2.

The instant application recites transmitting the frequency-modulated information signal without the upper and lower significant sidebands such that the transmitted information signal obtains a total power of said transmitter and includes only the instantaneous frequency varied about the carrier frequency. However if the information signal is transmitted without any sidebands the inherent result is an information signal with frequency varied around the carrier frequency.

The instant application recites without any upper and lower sidebands, which examiner asserts is the same as suppressed upper and lower sidebands.

6. Claims 16 and 32 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 15 and 31 of U.S. Patent No. 6,205,184 in view of Sakamoto (US Patent 5,200,835).

(1) With regard to claim 16, claim 16 inherits all the limitations of claim 15. However Applicant's Patent does not disclose suppressing includes a bandpass filter.

However Sakamoto discloses suppressing includes a bandpass filter (abstract, col. 1, lines 54-59, col. 3, lines 3-7, 25-28, col. 6, lines 19-24).

Therefore it would have been obvious to one of ordinary skill in the art to modify Applicant's Patent to incorporate suppressing using a bandpass filter in order for the

equivalent modulation figure to be lowered and a margin for distortion of the modulated signals is increased, making it possible to achieve a favorable demodulation (Sakamoto, col. 6, lines 33-36).

(2) With regard to claim 32, claim 32 inherits all the limitations of claims 31 and 16.

7. Claims 33-36 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 17 of U.S. Patent No. 6,205,184 in view of Wong (US Patent 4,586,174).

(1) With regard to claim 33, claim 33 inherits all the limitations of claim 1. However Applicant's Patent does not disclose method steps are applied within a wired digital and/or analog telecommunication system.

However Wong discloses wherein the method steps are applied within a wired digital and/or analog telecommunication system (col. 1, lines 12-14, 21-24, 25-33, 39-56, col. 2, lines 11-13, 22-24).

Therefore it would have been obvious to one of ordinary skill in the art to modify Applicant's Patent in view of Wong to incorporate wherein the method steps are applied within a wired digital and/or analog telecommunication system in order to permit telephone dialing to establish dialed up circuits for simultaneous telephone calls on a signal voice circuit (Wong, col. 2, lines 11-16).

(2) With regard to claim 34, claim 34 inherits all the limitations of claims 1 and 34.

(3) With regard to claim 35, claim 35 inherits all the limitations of claims 17 and 33.

(4) With regard to claim 36, claim 36 inherits all the limitations of claims 17 and 33.

Allowable Subject Matter

8. Claims 4, 5, 20, 21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: The instant application discloses a method for communication information on a carrier frequency via a communication channel connecting a transmitter on a transmitting side and a receiver on a receiving side. Prior art references show similar methods but fail to teach: **"converting the narrowband or vary narrowband frequency-modulated information signal with out upper and lower significant sidebands received from the communication channel to a narrowband intermediate frequency information signal without upper and lower significant sidebands before expanding its frequency deviation"**, as in claims 4 and 20, **"passing the narrowband IF information signal without upper and lower significant sidebands through a half wave rectifier and Schmitt trigger; and cleaning an information signal output by the Schmitt trigger with a wave shaping circuit"**, as in claims 5 and 21.

9. Claims 10, 13, 14, 26, 29, 30 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter: The instant application discloses a method for communication information on a carrier frequency via a communication channel connecting a transmitter on a transmitting side and a receiver on a receiving side. Prior art references show similar methods but fail to teach: "an output signal of the phase lock loop circuit being down-converted to a second wideband intermediate frequency information signal", as in claims 10 and 26.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

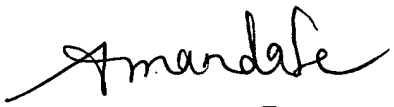
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 703-305-8326. The examiner can normally be reached on Monday – Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 703-305-4714. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Cicely Ware

cqw
May 16, 2005



AMANDA T. LE
PRIMARY EXAMINER